



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,472	07/17/2003	Ronald L. Gordon	FIS920030254US1	2964
32074 7590 09/24/2007 INTERNATIONAL BUSINESS MACHINES CORPORATION DEPT. 18G BLDG. 300-482 2070 ROUTE 52 HOPEWELL JUNCTION, NY 12533			EXAMINER FREJD, RUSSELL WARREN	
			ART UNIT 2128	PAPER NUMBER
			MAIL DATE 09/24/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/621,472

Applicant(s)

GORDON, RONALD L.

Examiner

Russell Frejd

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-28 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6.26.07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

In re Application of: Gordon

Examination of Application #10/621,472

1. Claims 1-28 of application 10/621,472, filed on 17-July-2003, are presented for examination. This communication is in response to the RCE filed on 24-July-2007, which requires consideration of the After-Final amendment and IDS received 26-June-2007. The present examiner has replaced the original examiner, Kimberly Thornewell, as the examiner of record.

Remarks

2. The rejections, made by the original examiner in the Final Rejection dated 26-March-2007, under 35 USC 102(e) as anticipated by Socha, USP Application Publication 2002/0152452 (claims 1, 2, 8, 9, 11, 12, 15, 16, 21, 22, 25 and 26); and the rejections under 35 USC 103(a) as anticipated by Socha in view of the articles by Kinter (claims 3 and 17) and Arnison (claims 13, 14, 27 and 28), are withdrawn in view of applicant's arguments in the present amendment. See section 5 below for additional explanation.

Specification Objections

3. The disclosure is objected to because on page 2, lines 12 and 15, there are two submissions for the term "RETs", namely *resolution enhancement techniques* [line 12], and Resolution Enhancement Technologies [line 15]. A clarification of these two terms is requested.

In re Application of: Gordon

Specification Objections under 35 U.S.C. § 132(a)

4. The amendment filed on 26-June-2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The material cited in the amendment which added the discussion of the Liebmann et al. reference, entitled "*TCAD development for lithography resolution enhancement*", to the specification in the paragraph beginning on page 1, line 27. The Liebmann et al. reference was cited for the first time in the IDS received on 26-June-2006, well after the original specification and first IDS, which were both filed on 17-July-2003.

The material cited in the amendment which added the discussion of the Ausschnitt et al. patent [6,869,739] to the specification in the paragraph beginning on page 2, line 13. The 6,869,739 patent has not been cited in the present application in either an IDS or a Form-892. The examiner respectfully notes that USP 5,629,772, issued to Ausschnitt, was considered by the previous examiner in the first IDS received on 17-July-2003.

For at least these reasons, the examiner posits that neither the Liebmann et al. reference or the 6,869,739 patent issued to Ausschnitt et al., were previously disclosed in the specification as originally filed on 17-July-2003, or submitted on an IDS accompanying the original specification. Therefore, since neither reference supports the original disclosure, any discussion incorporated into the specification, pertaining to these references, introduces new matter into the disclosure of the present invention. Applicant is required to cancel the new matter in the reply to this Office Action.

In re Application of: Gordon

Allowed Claims

5. Claims 1-28 are deemed allowable over the prior art of record at this time, pending resolution of any rejections or objections noted above, because the prior art does not specifically claim a method of improving a lithographic process, comprising at least the steps of: integrating an integrand for each of the finite number of arcs to obtain a finite number of contour integrals, each corresponding to one of the finite number of arcs, wherein each of the finite number contour integrals comprises an analytical solution; and determining a transmission cross-coefficient (TCC) comprising the sum of the finite number of contour integrals.

Response Guidelines

6. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

6.1 Any response to the Examiner in regard to this non-final action should be

directed to: Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, **or** the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

mailed to: Commissioner of Patents and Trademarks
P.O. Box 1450, Alexandria, VA 22313-1450

or faxed to: (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

Date: 11-September-2007

/Russell Frejd/
Primary Examiner AU 2128

**RUSSELL FREJD
PRIMARY EXAMINER**